DATASHEET

Enterasys® SecureStack™ B2 Switch

Secure Fast Ethernet Stackable L2/L3/L4 Edge Switch with Optional Policy Support

High availability design assures reliable network operations

Granular QoS capabilities support converged multimedia networks

Aligns network resource utilization with business goals and priorities

PoE supports a variety of network devices

Investment protection via Limited Lifetime Warranty

460.8Gbps capacity and 104.8Mpps

Product Overview

Enterasys' leadership position in the switching market is further enhanced by the Enterasys® SecureStack™ B-Series stackable enterprise switches. The SecureStack B2 is a high-performance Fast Ethernet edge switch that provides scalable, wire-rate performance in support of the bandwidth-intensive and delay-sensitive requirements of today's demanding applications. With support for 16,000 MAC addresses, the B2 is an excellent choice for environments that require complete multilayer switching capabilities and support for high density 10/100 Ethernet ports. The B2 is well suited for 100Mb networks that may migrate to a predominantly Gigabit Ethernet network. In addition to its complete multilayer switching capabilities, the B2 also provides multilayer packet classification and priority queuing for differentiated services. Along with a switch capacity of 57.6Gbps, the B2 provides up to 48 10/100 Ethernet ports as well as 4 10/100/1000 Ethernet uplink ports. Leveraging the B2's wire-rate stacking capability, as many as 8 B2s can be interconnected in a single stack to create a virtual switch that provides 460.8Gbps of capacity and up to 384 10/100 Ethernet ports as well as 32 10/100/1000 Ethernet uplink ports.

Robust quality of service (QoS) features enable strong support for integrated multimedia networks, including Voice over IP, video, as well as all types of data-intensive applications. The B2's optional policy license enables its highly customizable Layer 2/3/4 packet classification capabilities to work together with the 8 hardware-based priority queues associated with each Ethernet port to support a suite of differentiated services with as many as 8 distinct priority levels. In conjunction with its non-blocking L2 switching architecture, the B2's intelligent queuing mechanisms ensure that mission-critical applications receive prioritized access to network resources.

The B2 provides a secure network by utilizing its authentication and security features, which can be applied at the port level or at the user level. Making use of the NetSight® Policy Manager or a standard CLI, the SecureStack role-based architecture enables a network administrator to define distinct roles or profiles that represent operational groups within a business (e.g., employee, executive, guest, etc). Multiple users/devices per port can be authenticated via IEEE 802.1X, MAC address, or web authentication, and then assigned a predefined operational role. Network operations can be easily tailored to meet business-oriented requirements by providing each role with individualized access to network services and applications (e.g., a guest should have different network access privileges than an employee).

Benefits

Business Alignment

- Granular QoS capabilities support converged multimedia networks
- Aligns network resource utilization with business goals and priorities
- Reliable network operation for mission critical applications

Operational Efficiency

- Scalable architecture supports continued growth of network capacity
- Consolidated management capabilities reduce network operational expenses
- Security capabilities without the high overhead

Security

- Network resources securely allocated according to user roles
- Network security maintained concurrently with user mobility
- Architecture designed with integral network security

Support and Service

- Industry leading customer satisfaction and first call resolution rates
- Personalized services
- Limited Lifetime Warranty

There is nothing more important than our customers.

The SecureStack product line provides high port density in a 1u footprint and is environmentally friendly by design. By maximizing port density within a given amount of rack space, the B2 minimizes its cooling requirements. The B2's overall electrical requirement is further reduced by a low current draw and an extreme tolerance for high environmental temperatures. A highly scalable architecture and a Limited Lifetime Warranty ensures that an B2 network investment will sustain a secure, feature rich and cost-effective network well into the future.

Reliability and Availability

The B2 design incorporates redundancy and failure protection mechanisms complete with automatic failover and recovery capabilities to provide a reliable network. An integral power supply is the primary source of power for the B2 and complete power redundancy is provided by an optional external power supply. In addition to the standard version of the B2, there is also a redundant Power over Ethernet (PoE) version of the B2 which supports network devices that require external power such as wireless access points, VoIP phones and network cameras. A virtual switch can be created by interconnecting as many as 8 B2s in a single stack, which can be managed via a single IP address with redundant management connections. The B2's closed-loop stacking (CLS) capability utilizes bidirectional switch interconnects to maintain connectivity within the virtual switch despite any physical switch-level failure. Up to 8 Ethernet ports can be grouped together to create a multi-link aggregation group (LAG). A LAG's Ethernet ports can be collocated on a single B2 or they can be distributed across multiple B2s within a stack to prevent a switch-level failure from disrupting data communications.

Advanced Quality of Service

Robust quality of service (QoS) features enable strong support for integrated multimedia networks, including Voice over IP, video, as well as all types of data-intensive applications. With an optional policy license, the B2 provides highly customizable Layer 2/3/4 packet classification capabilities, which can be based upon physical port ID, MAC address, IP subnet, IP address, IP protocol type, IP type of service (ToS), differentiated services code point (DSCP), and TCP/UDP port. The B2 provides 8 hardware-based priority queues per Ethernet port, which work together with its packet classification capabilities to support a suite of differentiated services with as many as 8 distinct priority levels. The strict and weighted round robin queuing algorithms ensure that mission-critical applications receive prioritized access to network resources.

Security

The B2 provides a secure network by utilizing its authentication and security features, which can be applied at the port level or at the user level. Making use of the NetSight® Policy Manager or a standard CLI, the SecureStack role-based architecture enables a network administrator to define distinct roles or profiles that represent operational groups within a business (e.g., employee, executive, guest, etc). Multiple users/devices per port can be authenticated via IEEE 802.1X, MAC address, or web authentication, and then assigned a predefined operational role. In addition, the B2 also supports access control lists (ACLs) for supplementary network security. Network operations can be easily tailored to meet business-oriented requirements by providing each role with individualized access to network services and applications (e.g., a guest should have different network access privileges than an employee).

Investment Protection

The B2 is a cost-effective, feature-rich, stackable switch that provides a broad set of features today and will continue to deliver benefits well into the future. Customers can grow and/or enhance their networks while protecting their investment by adding B2s into existing B-Series networks and/or stacks. When multiple B2s are stacked together, each switch in the stack assumes the feature set that is common to all switches in the stack to ensure operational compatibility. All SecureStack products include a Limited Lifetime Warranty that continues for 5 years after the date of product discontinuation. For more information regarding warranty terms and conditions please go to http://www.enterasys.com/support/warranty.aspx.

Performance & Scalability

The B2 provides scalable, wire-rate performance in support of the bandwidth-intensive and delay-sensitive requirements of today's demanding applications. Along with a switch capacity of 57.6Gbps, the B2 provides up to 48 10/100 Ethernet ports as well as 4 10/100/1000 Ethernet uplink ports. Leveraging the B2's wire-rate stacking capability, as many as 8 B2s can be interconnected in a single stack to create a virtual switch that provides 460.8Gbps of capacity and up to 384 10/100 Ethernet ports as well as 32 10/100/1000 Ethernet uplink ports. The B2 supports hundreds of distinct policies (rules) that enable granular definition of network access capabilities for each role, thus aligning network resource utilization with business goals and priorities.

Standards and Protocols

MAC Address Table Size
16,000

VLANs
4,096 VLAN IDs
1,024 VLAN entries per stack

Embedded Services
Ingress Rate Limiting
IP TOS Rewrite
Layer 2/3/4 classification
Multilayer Packet Processing

Switching Services
IEEE 802.1D – MAC Bridges
IEEE 802.1s – Multiple Spanning Trees
IEEE 802.1t – 802.1D Maintenance
IEEE 802.1w – Rapid Spanning Tree Reconvergence
IEEE 802.3ab – GE over Twisted Pair
IEEE 802.3ad – Link Aggregation
IEEE 802.3af – PoE
IEEE 802.3i - 10Base-T
IEEE 802.3u - 100Base-T, 100Base-FX
IEEE 802.3z - GE over fiber
Full/half duplex auto-sense support on all ports
IGMP Snooping v1/v2/v3
Jumbo Frame support (9,216 bytes)
Loop Protection
One-to-One and Many-to-One Port Mirroring
Port Description
Protected Ports
Per-port Broadcast/Multicast/Unknown Unicast Suppression
Spanning Tree Backup Root
STP Pass Thru

VLAN Support
Generic Attribute Registration Protocol (GARP)
Generic VLAN Registration Protocol (GVRP)
IEEE 802.1p – Traffic Management/ Mapping to 8 queues
IEEE 802.1q – VLAN tagging
IEEE 802.1v – Protocol-based VLANs
IEEE 802.3ac – VLAN tagging extensions
Port-based VLAN (private port / private VLAN)
Tagged-based VLAN
VLAN Marking of Mirror Traffic

Quality of Service
8 priority queues per port
802.3x Flow Control
IP DSCP – Differentiated Services Code Point
IP precedence
IP protocol
Queuing Control – Strict and Weighted Round Robin
Source/Destination IP address
Source/Destination MAC address

Security
ARP Spoof Protection
DHCP Spoof Protection
Dynamic and Static MAC Locking
EAP Pass Thru
IEEE 802.1x Port Authentication
MAC-Based Port Authentication
RADIUS Accounting for MAC Authentication
RADIUS Client
RFC 3580 – Dynamic VLAN Assignment
RFC 3580 – Multi-user authentication per gigabit port
Password Protection (encryption)
Secure Networks policy license
Secured Shell (SSHv2)
Secured Socket Layer (SSL)
User and IP Phone Authentication
Web-Based Port Authentication

RFC and MIB Support
Enterasys Entity MIB
Enterasys Policy MIB
Enterasys VLAN Authorization MIB

IEEE 802.1X MIB – Port Access
IEEE 802.3ad MIB – LAG MIB

RFC 826 – ARP and ARP Redirect
RFC 951, RFC 1542 – DHCP/BOOTP relay
RFC 1213 – RFC 1213-MIB/MIB II
RFC 1493 – BRIDGE-MIB
RFC 1643 – Ethernet-like MIB
RFC 2131, RFC 3046 – DHCP client/relay
RFC 2233 – IF-MIB
RFC 2271 – SNMP Framework MIB
RFC 2618 – RADIUS Authentication Client MIB
RFC 2620 – RADIUS Accounting Client MIB
RFC 2668 – Managed Object Definitions for 802.3 MAUs
RFC 2674 – P-BRIDGE-MIB
RFC 2674 – QBRIDGE-MIB VLAN Bridge MIB
RFC 2737 – Entity MIB (physical branch only)
RFC 2819 – RMON-MIB
RFC 2863 – IF-MIB
RFC 2933 – IGMP MIB
RFC 3289 – DiffServ MIB
RFC 3413 – SNMP Applications MIB
RFC 3414 – SNMP User-based Security Module (USM) MIB
RFC 3415 – View-based Access Control Model for SNMP
RFC 3580 – IEEE 802.1X Remote Authentication Dial In User Service (RADIUS) Usage Guidelines
RFC 3584 – SNMP Community MIB
RFC 3621 – Power over Ethernet MIB

Management
Alias Port Naming
Command Line Interface
Configuration Upload/Download
Editable Configuration File
FTP/TFTP client
Multi configuration File Support
NetSight Automated Security Manager
NetSight Console
NetSight Inventory Manager
NetSight Policy Manager
Node/Alias Table
RFC 854 – Telnet
RFC 1157 – SNMP
RFC 1901 – Community-based SNMPv2
RFC 2271 – SNMP Framework MIB
RFC 2933 – IGMP MIB
RFC 3413 – SNMP Applications MIB
RFC 3414 – SNMP Usm MIB
RFC 3415 – View-based Access Control Model for SNMP
RMON (Stats, History, Alarms, Events)
Simple Network Time Protocol (SNTP)
SSH
Syslog
Telnet
Text-based Configuration Upload/Download
Web-based Management
Webview via SSL Interface

Switch Model Specifications

	B2H124-48	B2H124-48P
Performance		
Throughput Capacity wire-speed Mpps (switch / stack)	13.1Mpps / 104.8Mpps	13.1Mpps / 104.8Mpps
Switching Capacity (switch / stack)	17.6Gbps / 140.8Gbps	17.6Gbps / 140.8Gbps
Stacking Capacity (switch / stack)	40Gbps / 320Gbps	40Gbps / 320Gbps
Aggregate Throughput Capacity (switch / stack)	57.6Gbps / 460.8Gbps	57.6Gbps / 460.8Gbps
PoE Specifications		
802.3af Compliance	N/A	Yes
System Power	N/A	360 watts per switch with up to 15.4 watts per port Per-port switch power monitor: • Enable/disable • Priority safety • Overload & short circuit protection
Physical Specifications		
Dimensions (H x W x D)	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")	H: 4.4 cm (1.73") W: 44.1 cm (17.36") D: 36.85 cm (14.51")
Net Weight	5.27 kg (11.61 lb)	6.50 kg (14.32 lb)
MTBF	138,741 hours	115,872 hours
Physical Ports	• (48) 10/100 auto-sensing, auto-negotiating, MDI/MDI-X RJ45 ports • (4) mini-GBIC ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port	• (48) 10/100 PoE auto-sensing, auto-negotiating, MDI/MDI-X RJ45 ports • (4) mini-GBIC ports • (2) dedicated stacking ports • (1) DB9 console port • (1) RPS port
Power Requirements		
Nominal Input Voltage	100 – 240 VAC	100 – 240 VAC
Input Frequency	50 – 60Hz	50 – 60Hz
Input Current	0.8A Max	7.5A Max
Power Consumption		
Temperature		
IEC 6-2-1 Standard Operating Temperature	0° to 50° C (32° to 122° F)	0° to 50° C (32° to 122° F)
IEC 6-2-14 Non-Operating Temperature	-40° to 70° C (-40° to 158° F)	-40° to 70° C (-40° to 158° F)
Heat Dissipation	205 BTUs/Hr	1,451 BTUs/Hr
Humidity		
Operating Humidity	5% - 95% non-condensing	5% - 95% non-condensing
Vibration		
	IEC 68-2-6, IEC68-2-36	IEC 68-2-6, IEC68-2-36
Shock		
	IEC 68-2-29	IEC 68-2-29
Drop		
	IEC 68-2-32	IEC 68-2-32
Agency and Regulatory Standard Specifications		
Safety	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1	UL 60950-1, CSA 22.1 60950, EN 60950-1, and IEC 60950-1
EMC	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3	FCC Part 15 (Class A), ICES-003 (Class A), BSMI, VCCI V-3, AS/NZS CISPR 22 (Class A), EN 55022 (Class A), EN 55024, EN 61000-3-2, and EN 61000-3-3

Redundant Power Supply Equipment Specifications

C2RPS-CHAS2 SecureStack Power Shelf

Power Supply Slots
2

Dimensions (H x W x D)*
48.2 cm (19.0") x 5.5 cm (2.2") x 18.0 cm (7.0")

Weight
0.95 kg (2.09 lbs)

Note: dimensions include integrated rack mount ears

C2RPS-CHAS8 SecureStack Power Shelf

Power Supply Slots
8

Dimensions (H x W x D)*
44.0 cm (117.3") x 22.26 cm (8.77") x 26.4 cm (10.4")

Weight
5.27 kg (11.6 lbs)

C2RPS-PSM Power Supply

Dimensions (H x W x D)
19.6 cm (7.7") x 5.2 cm (2.04") x 25.7 cm (10.1")

Net Weight (Unit Only)
1.75 kg (3.85 lbs)

Gross Weight (Packaged Unit)
3.20 kg (7.04 lbs)

MTBF
300,000 hours

Operating Temperature
5° C to 40° C (41° F to 104° F)

Storage Temperature
-30° C to 73° C (-22° F to 164° F)

Operating Relative Humidity
10% to 90%

AC Input Frequency Range
50-60 Hz

AC Input Voltage Range
100 - 240 VAC

Maximum Output Power
156 W continuous

C2RPS-POE Power Supply

Dimensions (H x W x D)*
4.45 cm (1.75") x 44.5 cm (17.5") x 16.5 cm (6.5")

Net Weight (Unit Only)
3.47 kg (7.63 lbs)

Gross Weight (Packaged Unit)
4.95 kg (10.89 lbs)

MTBF
589,644 hours at 25° C (77°F)

Operating Temperature
5° C to 40° C (41° F to 104° F)

Storage Temperature
-30° C to 73° C (-22° F to 164° F)

Operating Relative Humidity
10% to 90%

AC Input Frequency Range
50-60 Hz

AC Input Voltage Range
100 - 240 VAC

Maximum Output Power
500 W continuous

Ordering Information

SecureStack B2 Switches	
Part Number	**Description**
B2H124-48	SecureStack B2 with (48) 10/100 RJ45 ports, (4) mini-GBIC ports, and (2) dedicated stacking ports. Total active ports per switch: all 52 ports.
B2H124-48P	SecureStack B2 with (48) 10/100 PoE RJ45 ports, (4) mini-GBIC ports, and (2) dedicated stacking ports. Total active ports per switch: all 52 ports.
Optional Software Licenses	
B2POL-LIC	SecureStack B2 policy license (per switch)
B2POL-LIC25	SecureStack B2 policy licenses – Qty of 25
B2POL-LIC50	SecureStack B2 policy licenses – Qty of 50
Cables	
C2CAB-SHORT	SecureStack stacking cable for connecting adjacent switches (30cm)
C2CAB-LONG	SecureStack stacking cable for connecting top switch to bottom switch (1m)
C2CAB-5M	SecureStack stacking cable for 48-port B2/C2 models and all B3/C3 models (5m)
SSCON-CAB	SecureStack Console Cable (for use on all A2, B2, B3, C2, and C3 switches)
MGBIC Modules	
MGBIC-02	Mini-GBIC with 1000Base-T via RJ45 Connector
MGBIC-08	Mini-GBIC with 1000Base-LX/LH (70KM Long Haul) SMF via LC Connector
MGBIC-LC01	Mini-GBIC with 1000Base-SX via LC Connector
MGBIC-LC03	Mini-GBIC with 1000Base-LX/LH (2KM Long Haul) MMF via LC Connector
MGBIC-LC07	1 Gb, Extended Long Reach, 1000Base-EZX, IEEE 802.3 SM, 1550 nm Long Wave Length, 110 KM, LC SFP
MGBIC-LC09	Mini-GBIC with 1000Base-LX via LC Connector
MGBIC-MT01	Mini-GBIC with 1000Base-SX via MTRJ Connector
SecureStack Redundant Power Supply Equipment	
C2RPS-CHAS2	SecureStack 2-slot RPS chassis (supports up to 2 C2RPS-PSMs)
C2RPS-CHAS8	SecureStack 8-slot RPS chassis (supports up to 8 C2RPS-PSMs)
C2RPS-PSM	SecureStack 150-watt redundant Non-PoE power supply with one DC cable
C2RPS-SYS	SecureStack 8-slot RPS chassis plus 1 C2RPS-PSM (chassis supports up to 8 C2RPS-PSMs)
C2RPS-POE	SecureStack 500-watt redundant PoE power supply with one DC cable

Warranty

As a customer-centric company, Enterasys is committed to providing quality products and solutions. In the event that one of our products fails due to a defect, we have developed a comprehensive warranty that protects you and provides a simple way to get your products repaired or media replaced as soon as possible.

SecureStack B2 switches come with a Limited Lifetime Warranty against manufacturing defects. For full warranty terms and conditions please go to: www.enterasys.com/support/warranty.aspx.

Service and Support

Enterasys Networks provides comprehensive service offerings that range from Professional Services to design, deploy and optimize customer networks, customized technical training, to service and support tailored to individual customer needs. Please contact your Enterasys account executive for more information about Enterasys Service and Support.

Contact Us

For more information, call Enterasys Networks toll free at 1-877-801-7082, or +1-978-684-1000 and visit us on the Web at enterasys.com

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Patented Innovation

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01/09

Delivering on our promises. On-time. On-budget.